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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/425,401

10/22/1999

JOHN S. YATES JR.

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EXAMINER

CHAVIS, JOHN Q

ART UNIT

PAPER NUMBER

2193

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/425,401

Applicant(s)

YATES ET AL.

Examiner

John Chavis

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. The applicant's request for withdrawal of the notice of allowability has been approved.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-51 of U.S. Application No. 09/330,852.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences are that the current application claims (during a profiled interval of execution...); while this feature is considered inherent in '852 to enable the recording of profiled information referenced on line 23 of claim 1. The present application also indicates on lines 6-7 of claim 1 that the profiled execution

interval of the “two classes”, which does not appear to have clear antecedent basis provided for in either application (see line 18 of the previous application). Therefore, it is not clear if these two features are the same or not. However, since they are unclear in both applications, they will be treated as the same for examination purposes.

Therefore, the claims may not be written identically with the same terminology; but, they are considered to cover the same patentable invention claimed in '852. Most of the differences in the inventions occur in the '852 reference, such as “during a profile quiescent interval...record no profile information..” The recording or not recording profile information is considered a choice of design. Furthermore, it appears the next phrase supports this choice of design also; since it provides for “after a triggering event...record...all events...”, which provides support for the feature of lines 6-7 of '401. The feature of “recording continuing until a predetermined stop condition is reached” ('852) is provided for in '401 via the “profiled interval” in line 2 of claim 1. Other features of claim 1 of '852 appears to be non functional descriptive material such as “efficiently tailored to annotate...”, which does not enable an annotation function; but, merely indicates that the system is capable of performing the function. The processor of '401 is also considered capable of annotating. The remainder of the claims are rejected for the same reasons in view of obvious double patenting.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-5, and 7-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Heisch (6,006,033).

CLAIMS

Heisch

1. A method, comprising:
executing a program on a computer,

during a profile interval...

without the program having been
program having been compiled for profiled
execution, the program being coded in an
instruction set in which an interpretation of an
instruction depends on a processor mode
not expressed in the binary representation
of the instruction, ...profile information
describing a least all events occurring
during the profiled execution interval...;

See the title and the abstract.
See col. 2 lines 14-25.

See fig. 1.

See col. 2 line 65-col. 3 line 3,
which optimizes based on
actual behavior (i.e. not having
been compiled for profiled
execution. Therefore, the feature
depends on the processor mode,
or information not known at
compile time, col. 5 lines 13-28
Instruction pipelines are utilized
in modern processors to keep
the system from remaining idle
while a single function executes,
see any computer dictionary.

Heisch is considered to inherently provide for the feature for that same reason, see figs. 2, 4 and 5.

a divergence of execution from sequential execution;

See col. 2 lines 51-59.

a processor mode change that is not inferable from the opcode of the instruction that induces the processor mode change taken together with a processor mode before the mode change instruction;

See col. 2 lines 38-59.

the profile information further identifying each distinct physical page of instruction text executed during the execution interval.

See col. 4 lines 14-21, which indicates that different parts of the program can be exercised in different sequences or amounts (which inherently includes pages).

As per claims 2-5, 7-11, 16-19, 21-26, 28-30, see the rejection of claim 1.

The features of claims 12-15 are taught via col. 12 lines 29-64 and fig. 1.

In reference to claims 20 and 27, see the abstract "independent of procedure of other structural boundaries".

The invention taught by Magnusson et al. (IEEE reference) is also considered pertinent to the applicant's disclosure; since, it also provides for implementation via multiple cpu's (hardware resources) based on their availability in the system, see page 69, which is based on the binary, see the introduction, and utilizes TLB's (page 64) for page simulation (page 66).

Furthermore, Argawal (5,768,500) specifically references specialized hardware for profiling in col. 8.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 USC 103 as obvious over Heisch in view of Roediger (5,960,198). Heisch does not specifically indicate that a events that match time-independent criteria is used in his system; however, the feature is taught by Roediger in an analogous art, col. 4 lines 7-13, to enable control over when data is collected, col. 1 lines 49-64 based on a bit, col. 3 lines 3-15, via multiple cpu's (col. 5 lines 42-46) executing simultaneously (time-independent), parallel (col. 8 lines 14-29) and initiated via hardware (col. 6 lines 61-col. 7 line 8, col. 8 lines 21-29). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Heisch's invention with the teachings of Roediger for the same reasons utilized by Roediger to enable control over when data is collected to improve performance in specific areas.

Furthermore, the feature of determining how pages are offset is considered a choice of design; since, the number of the page assigned does not affect the process of profiling. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the feature in Heisch's system; since, some type of

numbering is required for pages and it would have been obvious to a person of ordinary skill in the related art at the time of the invention that various selections are available and selectable to enable access to specific pages.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Chavis whose telephone number is (703) 571-3720. The examiner can normally be reached on M-Tue & Th-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 571-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Chavis
Primary Examiner AU-2124